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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,680	02/07/2001	Naoya Kinoshita	6959-101XX/10020156	4108

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EXAMINER

WANG, LIANG CHE A

ART UNIT

PAPER NUMBER

2155

DATE MAILED: 06/09/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/778,680

Applicant(s)

KINOSHITA, NAOYA

Examiner

Liang-che Alex Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1-10 have been examined

Paper Submitted

2. It is hereby acknowledged that the following papers have been received and placed of record in the file:
 - a. **Information Disclosure Statements** in paper number 4 as received on 05/17/2001 are considered.

Specification

3. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of **50 to 150** words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Frailong et al., US Patent Number 6,⁰⁷³~~703~~,172, hereinafter Frailong. ^(HA)
6. Referring to claim 1, Frailong has taught an Internet communication system (figures 1 and 2) for serving a plurality of computers (items 214s) housed in a multi-unit building (client network 220) through an Internet service provider (ISP) (item 204), said Internet communication system comprising:
- a. a local area network (LAN) (Figure 2 item 210) composed of said plurality of computers (items 214s) operatively coupled to a switching hub (Col 4 lines 62-65);
 - b. a router (item 208) operatively coupled between said switching hub (item 210) and said ISP (item 204) connecting said LAN to the Internet (Col 5 lines 2-5);
 - c. means for providing network security for members of said multi-unit building LAN (Col 5 lines 15-17.)
7. Referring to claim 4, Frailong has further taught wherein said ISP is connected to the Internet by way of a high-speed data communication link (Figure 2 item 216 and Col 5 lines 5-7.)
8. Referring to claim 6, Frailong has further taught wherein said network security means further includes a firewall on said for preventing unauthorized access to said multi-unit building LAN from outside (Col 5 lines 15-17.)

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2, 3, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Frailong in views of Frantz et al., US Patent Number 5,959,990, hereinafter Frantz.

11. Referring to claim 2, Frailong has taught an invention as described in claim 1, Frailong has not taught each of said plurality of computer on said multi-unit building LAN as described in claim 1 includes a LAN interface card with a unique media control (MAC) address.

Frantz has taught the use of MAC address to associate with each network device in a network (Col 1 lines 45-51. and Col 4 lines 49-52)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the use of the association with MAC address of Frantz in Frailong such that to have each computer of Frailong includes a unique MAC address because both Frailong and Frantz has taught invention regarding data communication security in a local area network.

A person with ordinary skill in the art would have been motivated to incorporate Frailong and Frantz because as taught by Frantz, a common prior art method of reducing

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congestion is to separate a LAN into multiple LAN segments by way of a network device operating at the MAC sublayer (Col 1 lines 45-59.)

12. Referring to claim 3, Frailong as modified has taught an invention as described in claim 2, Frailong has further taught wherein said router (item 208) is operatively coupled to a router of said ISP (item 204) by way of a dedicated high-speed two-way data communication link (item 216), said dedicated high-speed two-way data communication link transmitting data packets, each of said data packets having an Internet Protocol (IP) header including a destination IP address, a source IP address and a block of binary data (Col 5 lines 7, and figure 2 item 216, communication link provides interfaces for a Ethernet, ISDN, T1 connection, which are known dedicated high-speed two-way data communication link transmitting data packets.)

13. Referring to claim 5, Frailong has taught an invention as described in claim 1, Frailong has not taught his security means includes a plurality of VLAN segmentation preventing unauthorized access between different VLAN by way of said switching hub.

However, Frantz has taught a plurality of VLAN segmented by way of said switching hub, each unit corresponding to a VLAN, each VLAN comprising at least one computer of said plurality of computers operatively connected to a port on said switching hub, said VLAN segmentation preventing direct communication between different VLANs by way of said switching hub (Figure 2A, Col 1 lines 45-49, Col 3 lines 51-67, Col 4 lines 49-65.)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the use of the association with VLAN of Frantz in

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Frailong such that to have each computer of Frailong includes a unique MAC address in a VLAN because both Frailong and Frantz has taught invention regarding data communication security in a local area network.

A person with ordinary skill in the art would have been motivated to incorporate Frailong and Frantz because as taught by Frantz, a common prior art method of reducing congestion is to separate a LAN into multiple LAN segments by way of a network device operating at the MAC sublayer (Col 1 lines 45-59.)

14. Referring to claim 7, Frailong as modified has taught an invention as described in claim 2, Frantz has further taught where in said security means further includes a MAC address look-up table on said switching hub for authenticating each computer on said multi-unit building LAN during communication (Col 4 lines 49-65.)
15. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frailong in views of Frantz and in further views of Kadambi et al., US Patent Number 6,104,696, hereinafter Kadambi.
16. Referring to claim 8, Frailong as modified has taught an invention as described in claim 3 and 7. Frailong as modified has not taught wherein the security means includes an address resolution protocol (ARP) table on said router for storing static IP address assigned to said plurality of computers.

However, Kadambi has taught the use of ARP table on a router to store IP address (Col 19 lines 6-33.)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the use of ARP table of Kadambi in Frailong as

modified such that to have each computer of Frailong as modified includes ARP table on a router to store IP address because Frailong, Frantz and Kadambi have taught inventions regarding data communication security in a local area network.

A person with ordinary skill in the art would have been motivated to incorporate Frailong as modified and Kadambi because, as taught by Kadambi, the advantage of use of ARP table would allow acknowledgement from one to another node to be handled in a fast manner without need to utilize a CPU on a destination end in order to identify the source MAC address to be the destination for the acknowledgement (Col 19 lines 29-33.)

17. Referring to claim 9, Frailong as modified has taught an invention as described in claim 8. Kadambi has further taught wherein said network security means further includes a computer communication identification port number allocated to each of said network computers for user authentication purposes, said ID port number automatically recognized by said router during data communication (Col 24 lines 20-21, 44-47, Col 25 lines 10-30.)
18. Referring to claim 10, Frailong as modified has taught an invention as described in claim 3. Frailong as modified has not taught the use of a data packet filter on said router for restricting the type of inbound transmission data from the Internet and for selective blocking of a range of IP addresses during data transmission from the Internet.

However, Kadambi has taught the use of a data packet filter on said router to filter out unwanted data packet based on a rule table (Col 21 lines 14-31.)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the use of a data packet filter of Kadambi in

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Frailong as modified such that to have a data packet filter on said router for restricting the type of inbound transmission data from the Internet and for selective blocking of a range of IP addresses during data transmission from the Internet because Frailong, Frantz and Kadambi have taught inventions regarding data communication security in a local area network.

A person with ordinary skill in the art would have been motivated to incorporate Frailong as modified and Kadambi because, as taught by Kadambi, filtering is one of the known security means to block out unwanted data packets (Col 21 lines 14-20.)

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objection made. Applicant must show how the amendments avoid such references and objections. See 37 CFR 1.111(c).
20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liang-che Alex Wang whose telephone number is (703) 305-8159. The examiner can normally be reached on Monday thru Friday, 8:30 am to 5:00 pm.
21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T Alam can be reached on (703)308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Liang-che Alex Wang
June 2, 2004


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER